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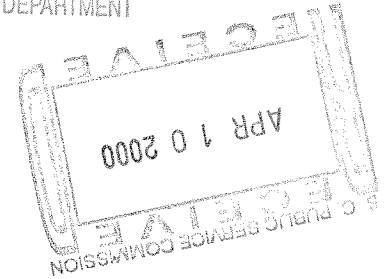
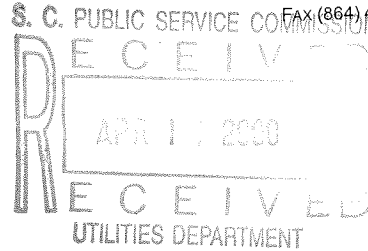
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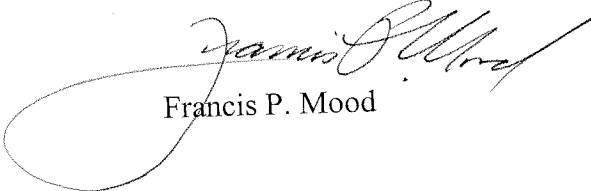
Mr. Gary E. Walsh, Executive Director
Public Service Commission of South Carolina
Koger Executive Center, Saluda Building
101 Executive Center Drive
I-20 and Bush River Road
Columbia, South Carolina 29210

Re: Docket No. 2000-0170-E

Dear Mr. Walsh:

Enclosed please find an original and twenty-five (25) copies of the Application of South Carolina Electric & Gas Company for a Certificate of Environmental Compatibility and Public Convenience and Necessity in the above-referenced Docket.

Very truly yours,


Francis P. Mood

FPM:csk
Enclosures
Copies to:

All Parties in Proof of Service

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ACCEPTED
APR 10 2000

SOUTH CAROLINA ELECTRIC & GAS COMPANY
BEFORE THE
SOUTH CAROLINA PUBLIC SERVICE COMMISSION

S. C. PUBLIC SERVICE COMMISSION
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DOCKET NO. 2000 - 0170 - E

S. C. PUBLIC SERVICE COMMISSION
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UTILITIES DEPARTMENT

**APPLICATION FOR A CERTIFICATE OF
ENVIRONMENTAL COMPATIBILITY
AND PUBLIC CONVENIENCE AND NECESSITY
FOR URQUHART RE-POWERING PROJECT**

DIRECT TESTIMONY AND EXHIBITS

SINKLER & BOYD, P.A.

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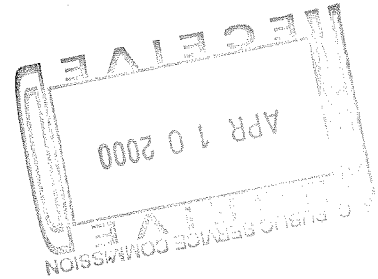
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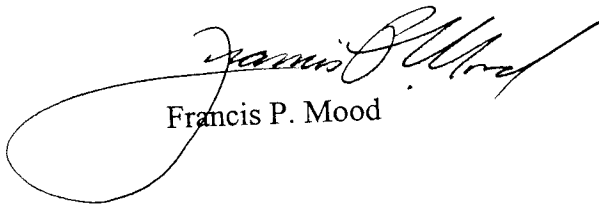
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Francis P. Mood

FPM:csk
Enclosures
Copies to:

All Parties in Proof of Service

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BEFORE THE SOUTH CAROLINA PUBLIC SERVICE COMMISSION
DOCKET NO. 2000-0170-E

IN RE: Application of South Carolina)
Electric & Gas Company for a)
Certificate of Environmental Compatibility)
and Public Convenience and Necessity for)
the Acquisition, Installation and Operation)
of two 150 MW, Combined Cycle gas)
turbines at its Urquhart Plant in Aiken)
County, South Carolina)

APPLICATION FOR CERTIFICATE
OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC
CONVENIENCE AND NECESSITY

South Carolina Electric & Gas Company ("SCE&G", "Company" "Applicant") hereby applies to the South Carolina Public Service Commission ("Commission") for a Certificate of Environmental Compatibility and Public Convenience and Necessity to acquire, install and operate two 150 MW combined-cycle gas-powered turbines and associated transmission facilities (the "Project") at the site of its Urquhart Plant in Aiken County, South Carolina. This application is filed pursuant to the provisions of S.C. Code Ann. § 58-33-10 et seq. (1976) (1998 Cum. Supp.).

In support of this application, SCE&G would respectfully show to the Commission:

1. Applicant. South Carolina Electric & Gas Company, Columbia, South Carolina, 29218, is a corporation duly organized and existing under the laws of the State of South Carolina, with its principal offices at 1426 Main Street, Columbia, South Carolina, 29201. The Company is engaged in the business of generating, transmitting, delivering, and providing electricity to public and private energy users for compensation.
2. Service Area. SCE&G provides electric service to more than 525,762 customers in a 15,000 square-mile service area in the central, southern and southwestern portions of South

Carolina. This area extends into 24 of the state's 46 counties. Columbia, Charleston, Aiken, Beaufort, and Orangeburg are major cities within the area.

3. Project Description. A description of the utility facility and the location at which it is to be built; power plant design features and facilities; information pertaining to the project site and associated facilities; and transmission considerations are all contained in the testimony and exhibits prefiled herein. Specifically, please see the Direct Testimony, with exhibits, of Abney A. Smith and Charles A. White.

4. Statement of Need. Currently, the Company has a net generating capacity from units on its system of 4,518 megawatts, consisting of 635 megawatts at V. C. Summer Nuclear Plant, 2,740 megawatts at 8 coal and steam generating plants, 771 megawatts at 6 hydro plants and 372 megawatts of peaking combustion turbine capacity at various locations throughout its system. Including power available under long-term purchase agreements with other utilities and non-utility generators, the Company has a total capability of 4,543 megawatts available for the summer of 2000.

In the period 1995 - 1999, SCE&G's system-wide electric sales grew by 11.1% to 20,018 billion kilowatt hours (KWH). The Company's electric customer base grew by 6.1%. Over the last four years, total electric customers and KWH sales increased at average annual rates of 1.5% and 2.7% respectively. SCE&G's total territorial energy needs are projected to increase at an annual rate of 2.4% from 2000 to 2004.

The Company's peak demands are forecasted to increase by 896 megawatts during the next decade. The Company's needs forecast and considerations affecting this forecast are set forth more fully in the testimony and exhibits prefiled herein. Without the additional capacity promised by the proposed plant, SCE&G will not be able to meet the increasing need for power

and assure system reliability. For more detailed analysis, please see the Direct Testimony, with exhibits, of Joseph M. Lynch, prefiled herewith.

In order to provide the necessary generating capacity and to assure reliable electric source to its customers, the Company proposes to install two (2) new General Electric 7FA turbine generators rated at approximately 150 megawatts each at its Urquhart Station in Aiken County, South Carolina. Additionally, two of the existing Urquhart steam turbine generators, with a capacity of approximately 75 MW each, will be repowered by steam produced in two (2) new heat recovery steam generators utilizing the exhaust energy from the two new combustion turbines. An inlet chiller for the combustion turbines will be installed to provide an additional 41 MW capacity during the summer peaking months. The total combined-cycle capacity for these units will be approximately 491 MW. See the testimony and exhibits of Abney A. (Skip) Smith for greater detail.

Two additional 230 KV transmission lines of approximately 6.3 miles in length will be constructed from Urquhart Station to connect to the existing Graniteville to Savannah River Site 230 KV transmission line, which passes through Urquhart Junction.

5. Environmental Studies. An environmental study prepared by General Engineer Laboratories is attached hereto as Exhibit A. Additional environmental information is contained in the Direct Testimony of John W. Preston, Jr., prefiled herewith.

6. Proof of Service. Exhibit B, attached hereto and made a part hereof, is proof of service of a copy of this application on the Chief Executive Officer of each municipality and the head of each state and local government agency charged with the duty of protecting the environment or planning land use in the area in the county in which any portion of the facility is to be located.

7. Public Notice. Attached as Exhibit C, and made a part hereof, is the form of public notice to be given to persons residing in the municipalities entitled to receive notice pursuant to S.C. Code Ann. § 58-33-120(3), by publication of a summary of the application, and the date on or about which it is to be filed, and the newspapers of general circulation in which such notice will be published. This notice will serve substantially to inform such persons of the filing of this application and proof of notice will be filed with the Commission when received from the various newspapers identified.

8. Correspondence or Communications. The name, title, address and telephone number of the persons to whom correspondence or communications relating to the application should be addressed are as follows:

Catherine D. Taylor
Legal Department
South Carolina Electric & Gas Company
Columbia, SC 29218
Tel. No. (803) 748-3538

Francis P. Mood, Esquire
Sinkler & Boyd, P.A.
P. O. Box 11889
Columbia, SC 29211
Tel. No. (803) 779-3080

Attorneys for Applicant

South Carolina Electric & Gas Company respectfully requests that the Commission issue a Certificate of Environmental Compatibility and Public Convenience and Necessity for the project described herein.

SOUTH CAROLINA ELECTRIC
& GAS COMPANY

By: 

Francis P. Mood, Its Attorney

Date: April 6, 2000

EXHIBIT A

Environmental Assessment
Proposed 230 kV Transmission Lines
Urquhart Generating Station
Beech Island, South Carolina

Submitted to:

South Carolina Electric & Gas Company
Power Delivery and Procurement Dept. MC 031
Columbia, South Carolina 29218

Submitted by:

General Engineering
A Division of General Engineering Laboratories, Inc.
Post Office Box 30712/2040 Savage Road
Charleston, South Carolina 29417

Submittal Date: March 15, 2000

Environmental Assessment

Proposed 230 kV Transmission Lines Urquhart Generating Station Beech Island, South Carolina

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Environmental Assessment
Proposed 230 kV Transmission Lines
Urquhart Generating Station
Beech Island, South Carolina

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Signature Page

This report, entitled "Environmental Assessment," has been prepared for the proposed 230 kV transmission lines and substation site for the Urquhart Generating Station near Beech Island, South Carolina. It has been prepared at the request of and for the exclusive use of the South Carolina Electric & Gas Company by Nathaniel I. Ball. It has been prepared in accordance with accepted quality control practices and has been reviewed by the undersigned.

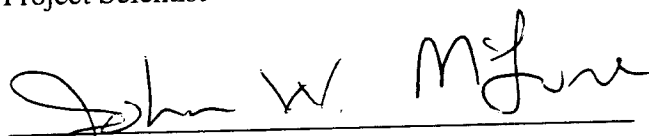
GENERAL ENGINEERING
A Division of General Engineering Laboratories, Inc.



Nathaniel I. Ball
Environmental Scientist



J. Edward Buxton
Project Scientist



John W. McLure, P.E.
Senior Engineer

March 15, 2000

Date



Environmental Assessment

Proposed 230 kV Transmission Lines Urquhart Generating Station Beech Island, South Carolina

Executive Summary

This Environmental Assessment (EA) addresses potential impacts associated with the proposed construction of two 230 kV overhead transmission lines from the South Carolina Electric & Gas Company's (SCE&G's) Urquhart Generating Station to Urquhart Junction. The proposed transmission lines will be located within an existing 325-foot wide cleared transmission line right-of-way (ROW). Therefore, it will not be necessary to clear any additional land, nor will it be necessary to convert any forested areas to shrub-scrub communities due to routine maintenance of the right-of-way.

The research and site inspection performed as part of this EA did not identify any occurrences of State or Federally listed threatened or endangered (T&E) species or any known, recorded archeological sites on the subject corridor. However, jurisdictional wetlands, designated floodplains, and floodways were identified within the existing 325-foot wide cleared ROW. Based on the location of the existing 115 kV transmission line structures, it will not be necessary to place any new transmission line structures in jurisdictional wetlands. Therefore, the construction of the proposed 230 kV overhead transmission lines will not impact jurisdictional wetlands.

The floodplains and floodways that were identified on the Flood Insurance Rate Map are located within distinct topographic drainage features. Since the existing transmission line structures are located on topographic slopes and ridges that are elevated above the bottom of the adjacent drainage feature, these structures were likely placed in areas that are designated as floodplains. There are no regulations governing the placement of transmission line structures in floodplains. Therefore, the placement of the new structures adjacent to the existing transmission line structures will likely not be a regulated activity. Based on our discussions with SCE&G, they will make every effort to ensure that the new transmission line structures will be located above the floodway boundary. Therefore, since the existing grade of the land surface will not be altered during the installation of the new transmission line structures, we do not anticipate that the construction of the proposed 230 kV transmission lines will have a significant impact on floodplains or floodways within the existing ROW.



Environmental Assessment

Proposed 230 kV Transmission Lines Urquhart Generating Station Beech Island, South Carolina

Executive Summary (cont.)

Based on the results of our site inspection and research, we do not anticipate that the construction of the proposed 230 kV transmission lines will result in any significant environmental impacts on jurisdictional wetlands, State or Federally listed T&E species, archeological or historical sites, or designated floodplains. However, please note that there is a potential that future occurrences of T&E species could occur on the subject corridor since the list of species can be modified, and since populations can diversify over time in response to natural migration and habitat changes. Therefore, any future report of T&E species in the vicinity of the subject corridor should be thoroughly investigated.

The construction of the proposed 230 kV transmission lines will result in minimal, if any, changes to the existing cleared ROW. Therefore, we do not anticipate that there will be any significant impact to the surrounding properties. No additional environmental assessment work of the subject property is recommended at this time.



Environmental Assessment

Proposed 230 kV Transmission Lines Urquhart Generating Station Beech Island, South Carolina

1.0 INTRODUCTION

This report presents the results of an Environmental Assessment (EA) of an existing transmission line right-of-way (ROW) that serves South Carolina Electric & Gas Company's (SCE&G's) Urquhart Generating Station (Urquhart Station) near Beech Island, South Carolina. The location of the ROW is shown on Figures 1 through 4, excerpts from the United States Geological Survey 7.5-minute quadrangle maps of Augusta East and Hollow Creek, South Carolina. For the purpose of this report, the existing transmission line ROW will be referred to as the subject corridor.

Mr. Danny Hicks of SCE&G requested that General Engineering conduct an Environmental Assessment for the subject corridor. This EA was prepared to provide information to the South Carolina Public Service Commission on the potential impact that the construction of two 230 kV transmission lines will have on the subject corridor and surrounding properties.

The new 230 kV transmission lines will be located entirely in Aiken County, South Carolina and will utilize single circuit, single pole construction. Based on our discussions with SCE&G, the new 230 kV transmission lines will be located within the same ROW as the existing 115 kV transmission lines. One of the new transmission lines will be located along a centerline between the northernmost 115 kV transmission lines that was located and flagged in the field by a South Carolina Registered Land Surveyor site prior to General Engineering's inspection. The second 230 kV transmission line will likely be collocated on a new single pole structure with the northernmost 115 kV transmission line.

The EA consisted of the tasks listed below:

- Examination of available State and Federal records
- Inspection of the subject corridor and surrounding properties
- Interviews with the applicable State and Federal agencies

State and Federal records were reviewed to determine if any State or Federally listed Threatened and Endangered (T&E) species, known, recorded archeological or historical sites, jurisdictional wetlands, or designated floodplains have been identified on or in the



vicinity of the subject corridor. Thorough field surveys were conducted to determine the presence or absence of jurisdictional wetlands and State and Federally listed Threatened and Endangered (T&E) species known to occur in the same geographic region as the subject corridor. This includes the identification of available habitat on the subject corridor and surrounding properties to determine if it is considered suitable for listed T&E species. The findings of this assessment are presented below.

2.0 PROJECT NEED

The proposed 230 kV transmission lines are needed to connect two new 150 megawatt gas-fired turbines associated with the Urquhart Station repowering project with SCE&G's power grid to assure system reliability and to satisfy growing power requirements. The repowered generating units and associated transmission lines will provide added support to the western portion of SCE&G's service area.

The proposed transmission lines will parallel four 115 kV transmission lines within an existing 325-foot wide ROW that runs from Urquhart Station to Urquhart Junction. Urquhart Junction is a point of intersection where multiple transmission lines disperse throughout SCE&G's transmission system. The proposed transmission lines will connect a new 230 kV substation at Urquhart Station to SCE&G's existing Graniteville-Savannah River Site (SRS) 230 kV transmission line.

3.0 PUBLIC INFORMATION REVIEW

This phase of the assessment included an examination of available public documents and interviews with persons who may have additional information on jurisdictional wetlands, 100-year floodplains, archaeological and historical sites, and State and Federally listed T&E species in the vicinity of the subject corridor. The results of this research are discussed below.

3.1 Threatened and Endangered Species

The United States Fish and Wildlife Service (USFWS) was contacted for information regarding Federally listed T&E species which may occur in the same geographic region as the subject corridor. The Charleston Office of the USFWS identified the bald eagle (*Haliaeetus leucocephalus*), wood stork (*Mycteria americana*), red-cockaded woodpecker (*Picoides borealis*), shortnose sturgeon (*Acipenser brevirostrum*), relict trillium (*Trillium reliquum*), harperella (*Ptilimnium nudosum*), and the smooth coneflower (*Echinacea*



laevigata) as potentially occurring in Aiken County, South Carolina. The USFWS also provided a list of seven species of concern which are not protected under the Endangered Species Act.

The South Carolina Department of Natural Resources' Heritage Trust Division (HTD) was contacted to obtain information regarding the presence or absence of State and Federally listed T&E species and species of concern in the vicinity of the subject corridor. According to data provided by HTD, there are no known, recorded occurrences of T&E species or species of concern on the subject corridor. However, the HTD identified Rafinesque's big-eared bat (*Corynorhinus rafinesquii*) and the gopher tortoise (*Gopherus polyphemus*) as State endangered species which potentially occur in Aiken County, South Carolina. In addition, HTD identified 71 additional species as being of state, regional, or national concern. Please note that the species of concern are not protected by either State or Federal regulations, and subsequently were not included as part of this investigation.

3.2 Archeological and Historic Sites

The South Carolina Institute of Archeology and Anthropology (SCIAA) was contacted to determine if there are any known, recorded archeological sites on the subject corridor. Although no archeological sites were identified in the site files that are maintained by SCIAA, they cautioned that the absence of archeological sites is likely due to the absence of professional investigations of the area rather than an actual absence of cultural resources. Therefore, if any archeological discoveries are made on the subject corridor in the future it will be necessary to report any findings to the State Historic Preservation Office in accordance with the applicable state regulations.

3.3 Jurisdictional Wetlands

The location of potential jurisdictional wetlands was determined by examining National Wetlands Inventory (NWI) maps for the Augusta East, Georgia-South Carolina and Hollow Creek, South Carolina, quadrangles. Please note that NWI maps are prepared using high altitude aerial photography. Therefore, field surveys are required to define the actual boundary of jurisdictional wetlands. Our site inspection indicates that several surface drainage features that were identified on the NWI maps do not meet the criteria outlined in the Corps of Engineers Delineation Manual, 1987. Therefore, these areas are not considered jurisdictional wetlands. Please note that a wetland delineation has not been submitted to the Charleston District, Corps of Engineers because none of the existing



transmission line structures are located in jurisdictional wetlands. Therefore, it will not be necessary to place any of the new transmission line structures in jurisdictional wetlands. The attached Figures 5 through 7 show the location of the subject corridor on an excerpt of the NWI maps.

3.4 Floodplains

The locations of floodways, the 100-year floodplain, and the 500-year floodplain on the subject corridor were determined by examining Aiken County Flood Insurance Rate Maps. These maps, which are published by the National Flood Insurance Program, designate special flood hazard areas. With the exception of the farm pond that is located between SC Highway 125 and Beech Island Road, each of the identified jurisdictional wetlands is located within one of the floodways or floodplains depicted on the Flood Insurance Rate Map. The tributary which is impounded to form the farm pond is identified on the Flood Insurance Rate Map. However, this area is not considered a special flood hazard area. The attached Figures 8 through 11 show the location of the subject corridor on an excerpt of Community Panel 450002 0110C.

According to information provided by the National Flood Insurance Program, the boundary between floodways and the 100-year floodplain is based on topographic elevations. Floodways are located in the lower elevations of a drainage feature and floodplains are located along the upper reaches of a drainage feature. Since the existing transmission line structures identified within the subject corridor are located on topographic slopes and ridges that are elevated above the bottom of the adjacent drainage features, these structures were likely placed in areas that are designated as 100-year floodplains.

There are no regulations governing the placement of transmission line structures in floodplains. Therefore, the placement of new structures adjacent to the existing transmission line structures will likely not be a regulated activity. Based on our discussions with SCE&G, they will make every effort to ensure that the new transmission line structures will be located above the floodway boundary. Therefore, we do not anticipate that the construction of the proposed 230 kV transmission lines will have a significant impact on regulated floodways within the existing ROW.



3.5 Interviews

Two people were interviewed concerning their knowledge of State and Federally listed T&E species and archeological sites in the vicinity of the subject corridor. The persons interviewed are listed below.

- Ms. Lori Duncan, Endangered Species Coordinator for the Charleston Office of the USFWS
- Mr. Jon Leader, Deputy State Archeologist with SCIAA

Ms. Duncan provided General Engineering with the most recent copy of the South Carolina Distribution Records of Endangered, Threatened, Candidate, and Species of Concern. She stated that although the gopher tortoise is considered a State endangered species, it is not considered a species of concern by the USFWS because of the number of populations throughout the Southeast Region of the United States. Ms. Duncan stated that a Section 7 consultation will be required by the USFWS if the construction of the proposed 230 kV transmission lines will require any Federal permits.

Mr. Leader stated that he is unaware of any thorough archeological investigations of the subject corridor. Therefore, it is possible that artifacts may be located below the ground surface within the existing transmission line right-of-way. Mr. Leader stated that a limited archeological survey was performed by the University of Georgia near the base of the Highway 28 Bridge. Likewise, surveys have been performed at Redcliffe State Park.

4.0 INSPECTION OF THE SUBJECT CORRIDOR

The subject corridor is an existing 6.5-mile transmission line right-of-way that runs from Urquhart Station to Urquhart Junction. During the weeks of February 21 and February 28, 2000, a visual inspection of the subject corridor and surrounding properties was conducted by Mr. Nathaniel I. Ball of General Engineering. The inspection consisted of walking the 325-foot wide ROW and taking field notes on the vegetation, wildlife, waterbodies, and physical features that were encountered.

The description of the subject corridor and surrounding properties has been divided into three sections according to the existing land use patterns and public roads which the ROW crosses over. Although access was granted to the subject corridor, access was not provided to the adjacent properties. The adjacent properties were visually inspected from the existing ROW or from nearby public roads. Based on our visual inspection of the



adjacent properties and a review of aerial photography, there is no indication that the available habitat located in these areas will differ significantly from the habitat identified along the edge of the cleared ROW. Please note that none of the adjacent properties will be impacted by the construction of the proposed 230kV transmission lines.

Based on our discussions with SCE&G, the proposed 230 kV transmission lines will be located within the existing cleared ROW. Therefore, the construction of the proposed transmission lines will not result in the clearing of any additional ROW, nor will it increase the frequency of clearing within the existing ROW. Since the construction of the proposed 230 kV transmission line will result in minimal, if any, changes to the existing habitat, this report does not address potential impacts of the construction of this project. The direct impacts of this project will be limited to the footprint of the single pole transmission line structures in uplands and the stringing of the actual transmission line. No changes are anticipated to the habitat located within the ROW or the surrounding properties.

4.1 Urquhart Station to South Carolina Highway 125

The subject corridor originates at the existing 115 kV switchyard at Urquhart Station. Before leaving Urquhart Station the transmission line spans two railroad tracks and a gas pipeline. The railroad tracks are used to deliver coal to Urquhart Station to operate the coal-fired turbines on-site. The coal storage area is located on the north side of the existing transmission lines. A stand of loblolly pine (*Pinus taeda*) is located south of the existing ROW on Urquhart Station.

The vegetation within the cleared ROW is dominated by broomstraw (*Andropogon virginicus*), blackberry (*Rubus betulifolius*), dewberry (*Rubus flagellaris*), and greenbrier (*Smilax* spp.). Based on topography and the aspect of the land surface to sunlight there are slight variations in species composition within the cleared ROW. However, the above mentioned species are clearly dominant throughout the ROW with the exception of areas that were identified as agricultural fields, pastures, and jurisdictional wetlands.

The forested areas located adjacent to the ROW were identified as either Pine Plantation, the Southern Mixed Hardwood community, or the Bottomland Hardwood community. More detailed descriptions of the adjacent communities and their potential to provide suitable habitat for State and Federally listed T&E species are included in Section 5.0.

The existing ROW extends southeast once it exits Urquhart Station. The area north of the ROW is dominated by planted loblolly pine and the area south of the ROW is



developed with residences. In addition to the herbaceous species noted above, several small groups of saplings, primarily southern red oak (*Quercus falcata*), winged sumac (*Rhus copallina*) and wild plum (*Prunus angustifolia*), have established themselves within the cleared ROW.

After approximately 0.25 miles, the transmission line crosses Carey Drive. The area northeast of this intersection is developed with several residences and a truck repair shop. An abandoned house is located southeast of the intersection. As the transmission line continues southeast it descends into a topographic swale which is identified on both the NWI map and the Flood Insurance Rate Map. The vegetation within the swale is approximately 6-7 feet tall and is dominated by a dense blackberry thicket.

Although the swale was identified on the NWI map, it was not identified as jurisdictional wetlands based on the criteria outlined in the Corps of Engineers Delineation Manual, 1987. Therefore, this area is identified as a dry channel on Figure 2. According to the Flood Insurance Rate Map the swale contains an area that is identified as floodway and one that is identified as the 100-year floodplain. As discussed in Section 3.4, every effort will be made by SCE&G to ensure that all of the new single pole transmission line structures will be installed above the floodway boundary. Therefore, the designated floodway will not be impacted by the installation of transmission line structures in the adjacent 100-year floodplain. The area on both sides of the existing ROW is identified as the SMH community with the exception of a detention pond along the south side of the ROW that is surrounded by a chain-link fence.

Approximately 0.25 miles southeast of Carey Drive the ROW ascends the opposite side of the topographic swale and turns northeast. Tires, lumber, furniture, and yard debris have been disposed within the ROW near the turn. The debris was likely hauled into these areas along a dirt road that crosses the ROW. Once the ROW crosses this dirt road, it descends into a second swale. The northwest edge of the swale identified within the existing ROW was identified as a jurisdictional wetland that extends into the adjacent Bottomland Hardwood community.

The vegetation within the swale is dominated by blackberry, sweet-gum (*Liquidambar styraciflua*), black willow (*Salix nigra*), and wool grass (*Scirpus cyperinus*). Water marks on the adjacent trees and the presence of stained leaf litter on the ground surface suggest that the swale occasionally floods. Therefore, the northwestern edge of the swale was identified as jurisdictional wetlands. Please note that the existing transmission



line structures are located in uplands on either side of the swale. Therefore, it will not be necessary to impact jurisdictional wetlands during the installation of any new transmission line structures.

As the ROW continues northeast and ascends the opposite side of the swale, the land surface is disturbed. Soil has been removed from upland areas adjacent to the swale and has been used to fill the southeast side of the ROW in the vicinity of South Carolina Route 28 (SC Route 28). The filled areas along SC Route 28 are currently being used to store rock, gravel, and trucks. A ditch is located along the northwest edge of the ROW that drains toward the jurisdictional wetland that was identified adjacent to the swale. The ditch extends approximately 500 feet northeast of SC Route 28 and is connected underneath the road by 2 box culverts. The ditch and swale are identified as drainage features on both the NWI and the Flood Insurance Rate Maps. The northern portion of the ditch was dry at the time of our site inspection and is not considered jurisdictional wetland. However, the southern portion of the ditch will likely be considered a jurisdictional wetland.

Between SC Route 28 and Swamp Road, the area on both sides of the ROW are developed. As the ROW continues northeast it crosses Swamp Road and a second gas pipeline. The cleared area northeast of Swamp Road consists of another swale that is dominated by a 5 to 6 foot tall blackberry thicket. According to the NWI and Flood Insurance Rate Maps, a surface drainage feature parallels the ROW for approximately 0.15 miles before the ROW turns east and ascends a steep slope toward South Carolina Highway 125 (SC Highway 125). Based on our site inspection of this area, no jurisdictional wetlands were identified within the ROW.

4.2 South Carolina Highway 125 to South Carolina Highway 65

Once the ROW crosses SC Highway 125, the land use of the adjacent properties changes. The area on either side of the ROW for the next 1.25 miles is primarily being used for the production of timber, in particular loblolly pine. The vegetation within the cleared ROW continues to be dominated by broomstraw, blackberry, and dewberry. In addition, approximately 500-feet after the ROW crosses SC Highway 125, the ROW turns toward the northeast.

As shown on Figure 2, the topography in the vicinity of the ROW slopes toward the southeast. The vegetation within several areas southeast of the ROW was identified as the SMH community. As the ROW approaches Scarborough Drive, the topography descends toward a farm pond. The farm pond is shown as a surface drainage feature on both the



NWI and the Flood Insurance Rate maps. The existing 115 kV transmission line structures are not located in the vicinity of the identified farm pond. Therefore, there will be no impacts to jurisdictional wetlands, floodways, or floodplains. Ponies, goats, calves, and emu are located in a pen that surrounds a portion of the farm pond. Horses and goats are located in a pasture on the northeast side of Scarborough Drive. Once the ROW crosses Scarborough Road it turns in an easterly direction toward Urquhart Junction.

The forested areas on either side of the ROW are identified as the SMH community until the ROW reaches a borrow pit near Beech Island Drive. Approximately 20 feet of material has been removed from the borrow pit and the vegetation within the borrow pit is dominated by wire grass (*Spartina patens*). The area adjacent to Beech Island Drive is developed with residences and the area within the ROW is maintained in a grassy state by routine mowing.

Once the ROW crosses Beech Island Drive, the ROW passes through 1.0 miles of agricultural fields. The surrounding property is also described as agricultural fields. At the time of General Engineering's site inspection, the fields had been plowed in preparation for spring planting. Several residences are located along the western side of South Carolina Highway 65 (SC Highway 65) and a small area within the ROW is surrounded by a barbed wire fence and appears to be used as pasture.

4.3 South Carolina Highway 65 to Urquhart Junction

East of SC Highway 65, the subject corridor is currently being used as pasture for cattle. The pasture extends south of the existing ROW. However, the SMH community is dominant north of the ROW. Once the ROW passes through approximately 1.0 miles of fenced pasture it reaches an area where timber has been clear cut on both sides of the ROW. A thin jurisdictional wetland channel is located along the northern edge of the pasture within the ROW and drains toward a small farm pond that is shown on Figure 4. Several acres of trees that surround the pond were not clearcut.

As the transmission line continues east, the area on either side of the cleared ROW is identified as Pine Plantation. The pine plantation consists of varying age stands of loblolly pine and longleaf pine (*Pinus palustris*). The cleared areas within the ROW are dominated by broomstraw, blackberry, and dewberry. However, scattered longleaf pine saplings are located in several areas within the ROW. As the ROW approaches Urquhart Junction the surrounding topography descends into the Town Creek drainage basin. The ROW crosses two tributaries of Town Creek before it reaches Urquhart Junction. These areas are



identified on both the NWI and Flood Insurance Rate Map. The existing transmission line structures are located on either side of the Town Creek drainage basin and on the ridge between the two tributaries. Therefore, it will not be necessary to install any transmission line structures in the identified jurisdictional wetlands. The forested areas in the vicinity of Town Creek were identified as the Bottomland Hardwood community.

5.0 DESCRIPTION OF THE AVAILABLE HABITAT

As noted previously, the proposed 230 kV transmission lines will be located within an existing 325-foot wide cleared ROW. Therefore, it will not be necessary clear trees during the construction of the new transmission lines. The available habitat within the subject corridor and surrounding forested properties were examined to determine if they are considered suitable for the State and Federally listed T&E species that are identified in Section 6.0. The habitat within the existing cleared ROW is addressed in Section 5.1, Cleared Right-of-Way, and Section 5.2, Pasture and Agricultural Fields. The habitat within the adjacent forested areas are described in the remaining three sections.

5.1 Cleared Right-of Way

The subject corridor is located within an existing cleared ROW. Therefore, the available habitat has been maintained for decades in a shrub or grassy state by routine mowing and the selected application of herbicides. Trees are removed within the ROW because of the potential hazard they could pose if they were allowed to grow and mature in the vicinity of the transmission lines.

The majority of the cleared ROW is dominated by broomstraw, blackberry, and dewberry. The ground cover is typically 2 to 3 feet high and saplings or shrubs are typically less than 1 or 2 inches in diameter. However, blackberry and greenbrier (*Smilax* spp.) form dense thickets that are greater than 5-feet tall within topographic swales that were identified within the ROW. In addition, based on the local topography and the aspect of specific areas to sunlight, various other species are present throughout the ROW.

Cactus (*Opuntia compressa*), reindeer moss (*Cladonia evansii*), bracken fern (*Pteridium aquilinum*), and scattered longleaf pine (*Pinus palustris*) are present on the topographic ridges or on dry sandy topographic slopes adjacent to drainage basins. Dog fennel (*Eupatorium capillifolium*), rabbit tobacco (*Gnaphalium obtusifolium*), verbena (*Verbena bonariensis*) and yellow jasmine (*Gelsemium sempervirens*) are present along nearly level topographic ridges which are not as dry as those where cactus is dominant.



There are four areas within the existing 6.5-mile ROW that were identified as jurisdictional wetlands. The majority of the wetland areas identified within the cleared ROW are not considered suitable habitat for the T&E species that are described in Section 6.0. These include an existing farm pond that does not contain vegetation, a wet swale that extends less than 30 feet into the existing ROW and drains toward a farm pond, and the swale and ditch that are located near SC Route 28.

The cleared area in the vicinity of the Town Creek drainage basin is considered suitable habitat for harperella. However, harperella was not identified during our site inspection. Please note that the reason why this area is considered suitable for harperella is because the clearing of the existing ROW has created suitable habitat for this species. Therefore, in the unlikely event that harperella is identified within the existing ROW in the future, we recommend that the clearing of the ROW be continued in order to maintain the open conditions which are considered suitable for harperella.

In addition, the dry sandy soils that are located throughout the existing ROW may be considered suitable for the gopher tortoise. However, the gopher tortoise was not observed during our site inspection. Nor were any gopher tortoise burrows identified within the cleared ROW. Therefore, we do not anticipate that the gopher tortoise will be impacted by the construction of the proposed transmission lines.

5.2 Pasture and Agricultural Fields

Areas beneath the transmission lines that are maintained as pasture and agricultural fields are subject to more frequent disturbances than the routine clearing of the ROW. Pasture land is either harvested for hay or is maintained in a grassy state by grazing cattle. Likewise, the agricultural fields are planted and harvested each year for commercial crop production. At the time of General Engineering's February 2000 site inspection, the agricultural fields had been plowed in preparation for spring planting. There are few, if any, shrubs or saplings present within these habitats, with the exception of field margins. In addition, the identified pasture and agricultural fields extend well beyond the limits of the ROW. The available habitat within the pasture and agricultural fields on the subject corridor and the surrounding properties is not considered suitable for the T&E species that are described in Section 6.0.



5.3 Pine Plantation

The existing transmission line ROW passes through a number of planted pine stands. The pine stands are typically located on topographic slopes and ridges. The majority of the loblolly pine stands are relatively dense because the trees are less than 25 years old and they do not appear to have been thinned or burned. The dense, young pine stands that were identified adjacent to the subject corridor are not considered suitable habitat for the T&E species that are described in Section 6.0.

5.4 Southern Mixed Hardwood Community

The SMH community is dominant in shallow swales and along topographic slopes adjacent to the existing ROW. These areas are primarily dominated by southern red oak water oak (*Quercus nigra*), sweet-gum (*Liquidambar styraciflua*), mockernut hickory (*Carya tomentosa*), white oak (*Quercus alba*), and loblolly pine. The SMH community forms a transition zone between the Pine Plantation and the Bottomland Hardwood community. The SMH community that is adjacent to the subject corridor is too dense to be considered suitable for the T&E species that are described in Section 6.0.

5.5 Bottomland Hardwood Community

The Bottomland Hardwood community which the ROW crosses near Urquhart Junction is identified as Town Creek on the USGS topographic maps. There are two branches of Town Creek which the ROW crosses south of Johnsons Lake. The water that flows through these depressions comes primarily from the outfalls associated with Johnson's Lake and another unnamed lake. The Bottomland Hardwood community is too dense to be considered suitable habitat for any of the T&E species described in Section 6.0.

The majority of the identified habitats within the cleared ROW and the adjacent forested communities are not considered suitable for the T&E species that are described in Section 6.0. Since no State or Federally listed T&E species were identified on the subject corridor or within the adjacent forested communities, we do not anticipate that the construction of the proposed 230 kV transmission lines will affect T&E species.

6.0 THREATENED AND ENDANGERED SPECIES

As noted previously, there are seven Federally listed T&E species that are known or suspected to occur in Aiken County, South Carolina. The following is a description of each of the T&E species and the habitat that is considered suitable for these species.



6.1 Bald Eagle

The bald eagle is the largest bird of prey known to occur in South Carolina and has a wingspan of approximately 7 feet. The bald eagle typically constructs its nest near water since its diet is largely dependent upon fish and small waterfowl. In the southeast, the nesting period is during the winter months. Bald eagles typically construct their nest in large, live pine trees. The USFWS habitat management guidelines protect the nesting sites. The nests, which may be as large as 6 feet across, are typically visible from the ground surface. The waterbodies (i.e. farm ponds and forested tributaries) in the vicinity of the transmission line ROW are not considered suitable for foraging by the bald eagle. Please note that the Savannah River, which is located approximately 500 feet west of the beginning of the subject corridor, is considered suitable habitat for the bald eagle. However, the bald eagle has not been identified utilizing the portion of the Savannah River that is adjacent to Urquhart Station. In addition, the construction of the proposed transmission lines within the existing ROW east of the Savannah River basin will not have a potential habitat for the bald eagle.

6.2 Smooth Coneflower

The smooth coneflower is a tall, perennial flower which occurs in open areas on dry sandy soils. The upright stem, which is typically between 2 and 3 feet tall, appears in the spring and persists until late fall. The leaves are alternately arranged on the lower portion of the stem and may be more than 1 foot in length. The flowering head is cone shaped with an outer fringe of pale purple rays and appears in summer. The smooth coneflower prefers basic soils associated with sparsely forested upland oak-hickory or mixed oak-pine communities. Black jack oak, wild quinine, little bluestem, and rattlesnake master are considered indicator species in South Carolina. The sparse canopy necessary for the smooth coneflower to persist is typically the result of frequent burning or cattle grazing. These openings commonly contain a highly diverse collection of members of the pea and aster families. Although the clearing of the ROW has created an opening where smooth coneflower could exist, neither the indicator species nor the plant diversity which is typical associated smooth coneflower habitat were identified within the ROW.

6.3 Red-Cockaded Woodpecker

The red-cockaded woodpecker (RCW) is a small black and white bird that is approximately 7 inches long. The RCW may be identified by its large white cheek patch, the horizontal rows of white spots on its back, and its distinctive call. Adult males have a



small red streak located above the cheek patch. The RCW is the only bird that constructs its nest inside live pine trees. The nests are located in pine trees (> 60 years old) that have developed red-heart disease or have soft heartwood. Trees which contain nesting cavities are easily recognized because the bark of the tree eventually becomes coated with sap. The RCW regularly pecks at the bark, which stimulates resin flow. The RCW requires extensive foraging habitat that is dominated by pine trees that are greater than 4 to 9 inches in diameter. The available habitat on the subject corridor and is not considered suitable for the RCW. Likewise, the adjacent pine plantations appear to be less than 25 years old and are considered too dense even for foraging by the RCW.

6.4 Wood Stork

The wood stork is a large wading bird that is more than 3 feet tall when it is mature. It is easily recognizable because of its mostly white feathers and dark gray unfeathered head. Wood storks can be recognized in flight by the large black area on the underside of their wings and their outstretched legs. Wood storks typically nest near coastal areas where they feed primarily on small fish and animals in the marsh. The waterbodies along the ROW are not considered suitable for foraging by the wood stork.

6.5 Shortnose Sturgeon

The shortnose sturgeon inhabits the lower portion of large rivers, such as the Savannah River, along the Atlantic Coast. They are usually less than three feet long and have five rows of sharp, pointed plates along the sides of their body. Juvenile and adult shortnose sturgeon spend most of the year along the brackish water interface or in saltwater. However, adults move far inland to spawn in fresh water. The jurisdictional wetlands and small channels that were identified within the ROW are not large enough to support this species. Therefore, these areas are not considered suitable habitat or spawning areas for the shortnose sturgeon.

6.6 Relict Trillium

Relict trillium is a perennial plant that has three whorled leaves. The mottled green leaves are elliptical and a small purple or greenish-yellow flower grows from the base of the leaves. Relict trillium typically grows in mature, open hardwood forests along streams. The cleared areas within the existing ROW are not considered suitable habitat. Likewise, the understory within the forested areas along Town Creek is too dense to be considered suitable for relict trillium.



6.7 Harperella

Harperella is a semi-aquatic plant that is typically found in savannahs, wet ditches, or floodplains. The relatively delicate, fluted stem may be up to 4-feet tall. The leaves are hollow, cylindrical, quill-like structures that may be greater than 12 inches long near the base of the plant. The flowers are grouped in small umbels similar to those in other members of the carrot family. The open marshy areas located where the ROW crosses Town Creek may be considered suitable habitat for harperella. However, it was not identified during our inspection of the subject corridor. As noted previously, the reason why this area is considered suitable for harperella is because the routine clearing of the existing ROW has created suitable habitat for this species. Therefore, if harperella is identified within the ROW in the future, we recommend that the clearing of the ROW be continued in order to maintain the open conditions which are considered suitable for harperella.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The research and site inspection performed as part of this EA did not identify any occurrences of State or Federally listed T&E species or any known, recorded archeological sites on the subject corridor. However, jurisdictional wetlands, designated floodplains, and floodways were identified within the existing 325-foot wide cleared ROW. Based on the location of the existing 115 kV transmission line structures, it will not be necessary to place any new transmission line structures in jurisdictional wetlands. Therefore, the construction of the proposed 230 kV overhead transmission lines will not impact jurisdictional wetlands.

The floodplains and floodways that were identified on the Flood Insurance Rate Map are located within distinct topographic drainage features. Since the existing transmission line structures are located on topographic slopes and ridges that are elevated above the bottom of the adjacent drainage feature, these structures were likely placed in areas that are designated as floodplains. Based on our discussions with SCE&G, they will make every effort to ensure that the new transmission line structures will be located above the floodway boundary. Therefore, since the existing grade of the land surface will not be altered during the installation of the new transmission line structures, we do not anticipate that the construction of the proposed 230 kV transmission lines will have a significant impact on floodplains or floodways within the existing ROW.

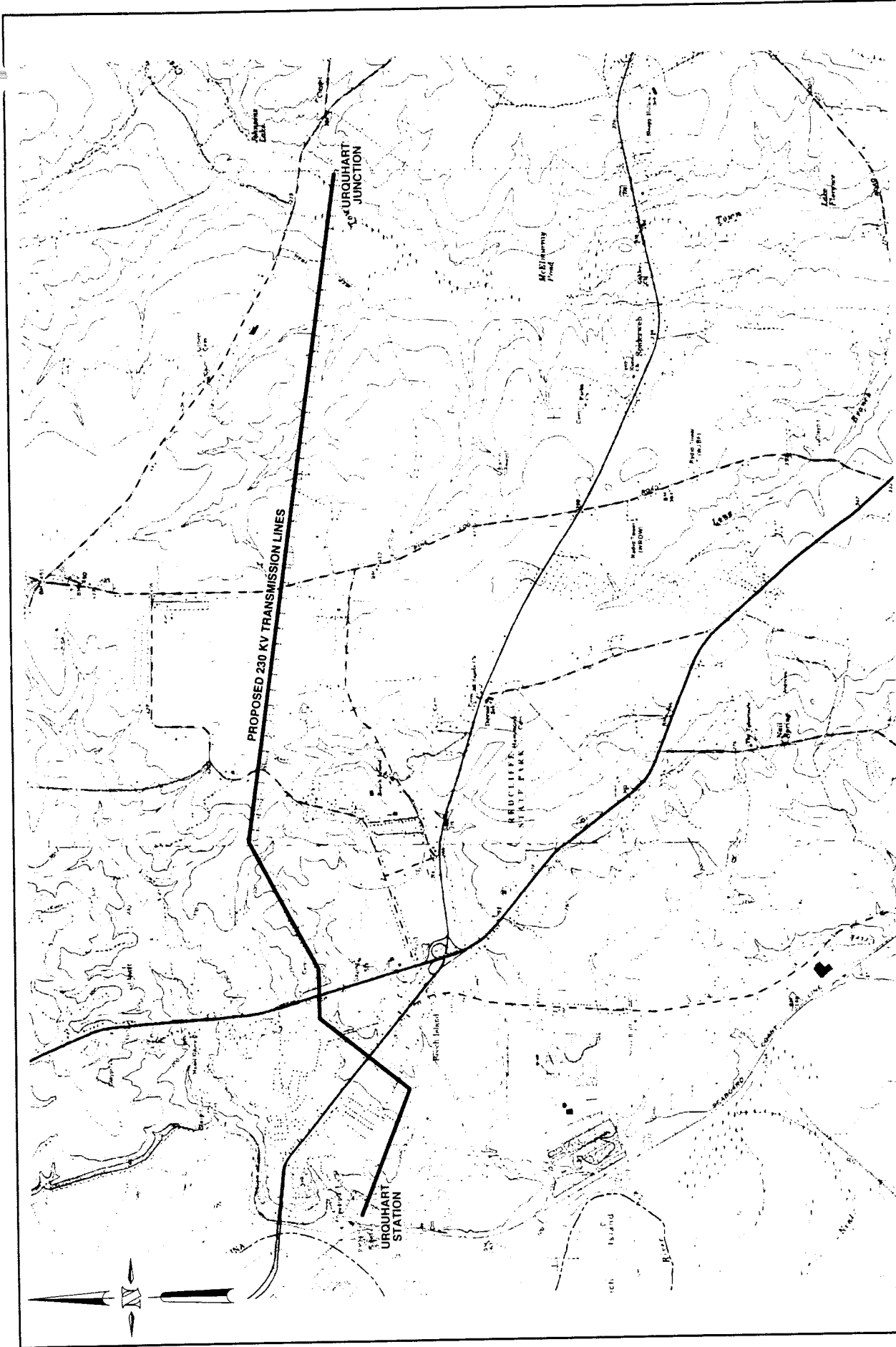


Based on the results of our site inspection and research, we do not anticipate that the construction of the proposed 230 kV transmission lines will result in any significant environmental impacts on jurisdictional wetlands, State or Federally listed T&E species, archeological or historical sites, or designated floodplains. However, please note that there is a potential that future occurrences of T&E species could occur on the subject corridor since the list of species can be modified, and since populations can diversify over time in response to natural migration and habitat changes. Therefore, any report of T&E species in the vicinity of the subject corridor should be thoroughly investigated.

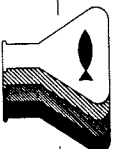
The construction of the proposed 230 kV transmission lines will result in minimal, if any, changes to the existing cleared right-of-way. Therefore, we do not anticipate that there will be any significant impact to the surrounding properties. No additional environmental assessment work of the subject property is recommended at this time.



11/11/11



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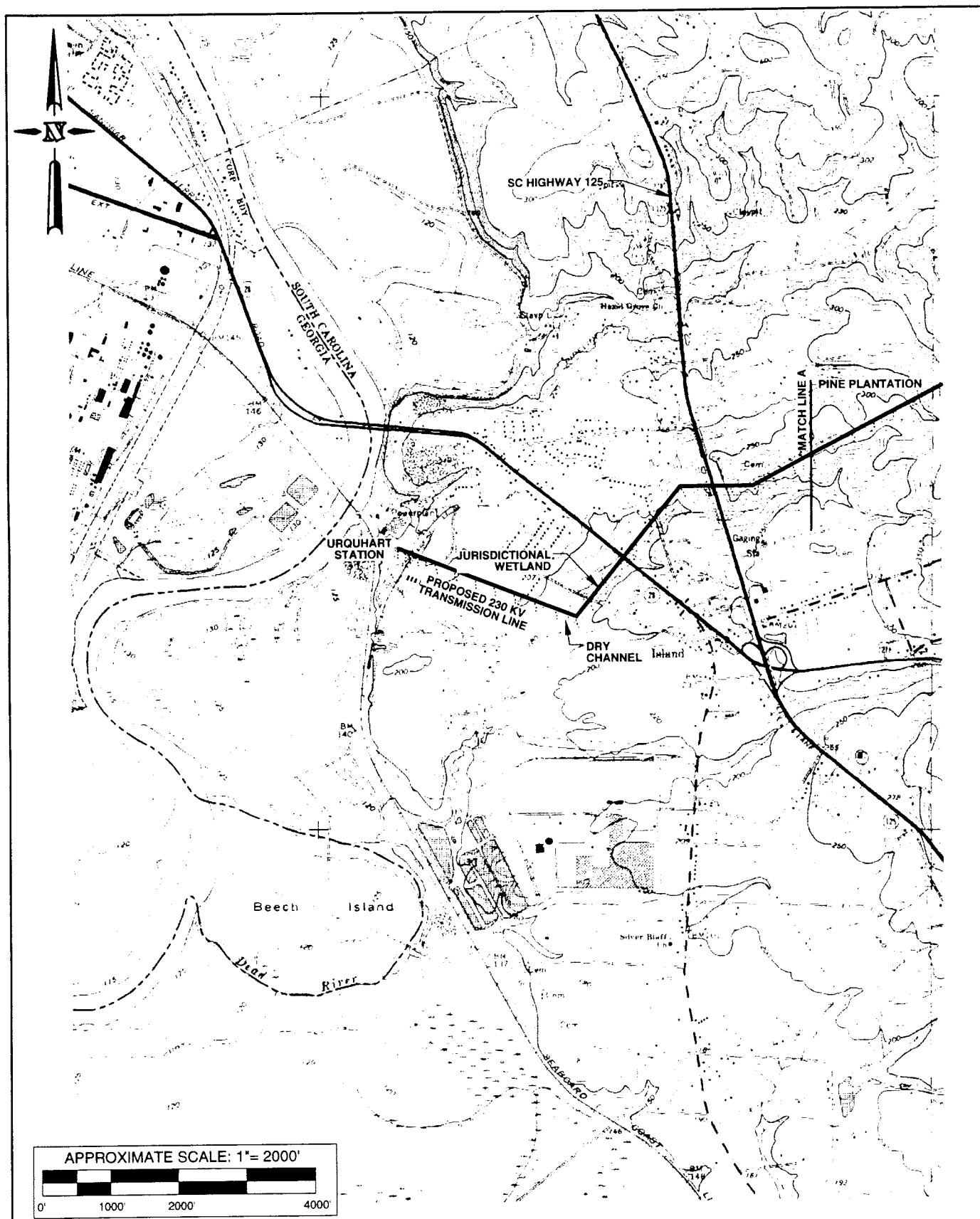
ENVIRONMENTAL ASSESSMENT
PROPOSED 230 KV TRANSMISSION LINE
UROHART STATION
BEECH ISLAND, SOUTH CAROLINA

SITE LOCATION MAP
USGS TOPOGRAPHIC MAP
AUGUSTA EAST AND HOLLOW CREEK
QUADRANGLES

FIGURE
1

DATE: March 7, 2000

DRAWN BY: XMX
APPRV. BY: NIB



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ENVIRONMENTAL ASSESSMENT
PROPOSED 230 KV TRANSMISSION LINE
URQUHART STATION
BEECH ISLAND, SOUTH CAROLINA

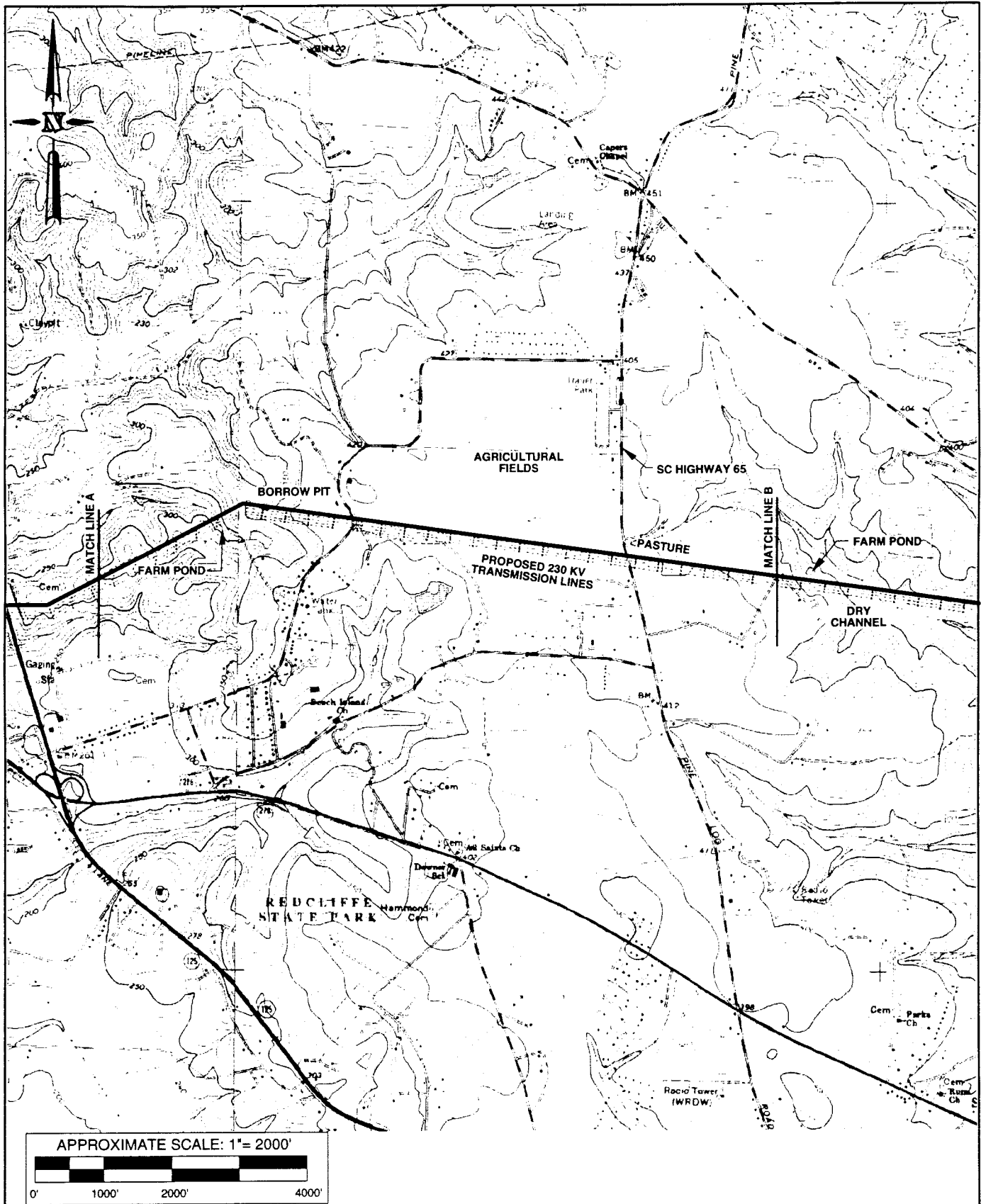
SITE LOCATION MAP
USGS TOPOGRAPHIC MAP
AUGUSTA EAST QUADRANGLE

FIGURE
2

DATE: March 8, 2000

DRAWN BY: XMJ

APPRV. BY: NIB



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URQUHART STATION
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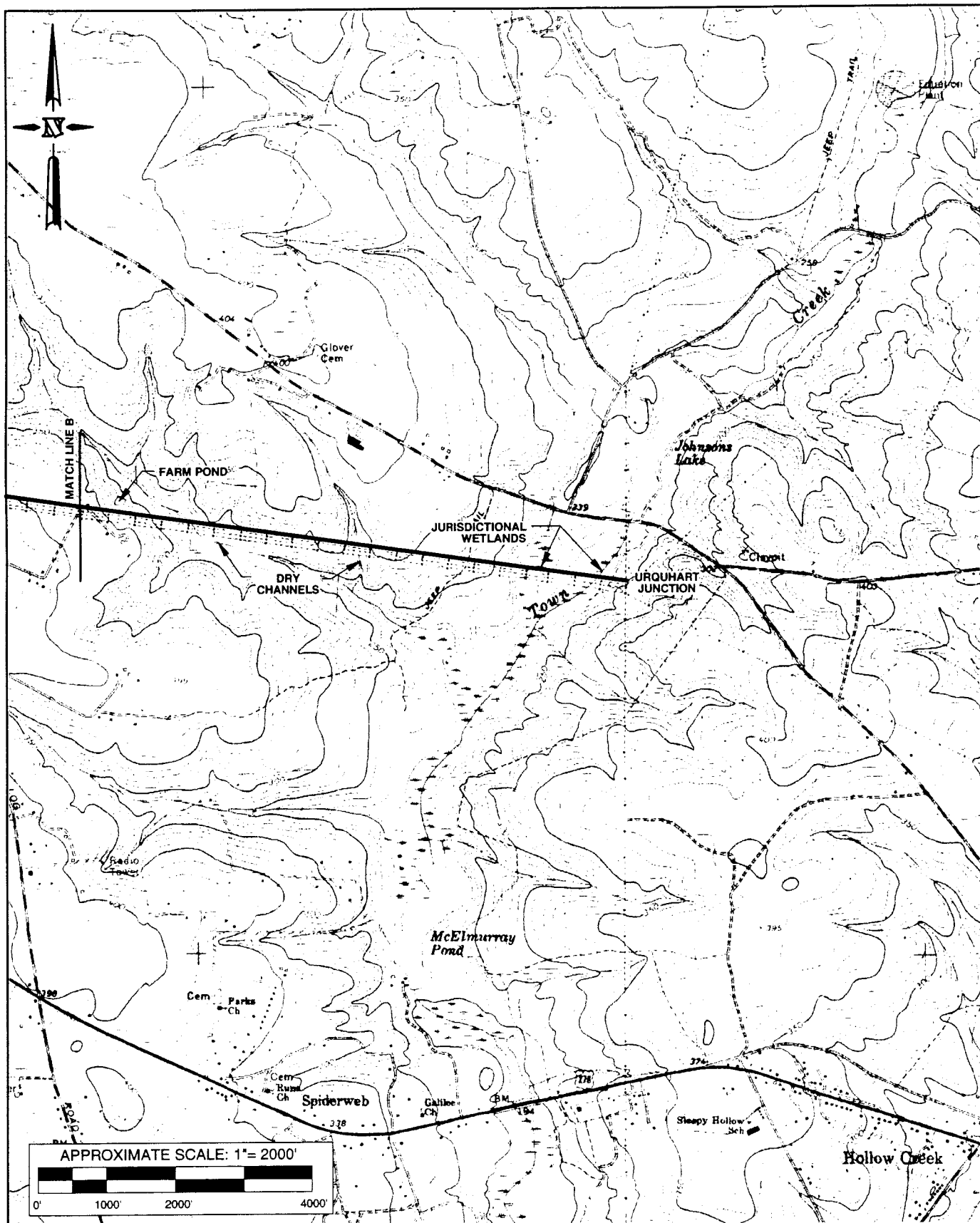
DATE: March 8, 2000

SITE LOCATION MAP
USGS TOPOGRAPHIC MAP
AUGUSTA EAST AND HOLLOW CREEK
QUADRANGLES

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FIGURE
3



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URQUHART STATION
BEECH ISLAND, SOUTH CAROLINA

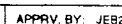
DATE: March 8, 2000

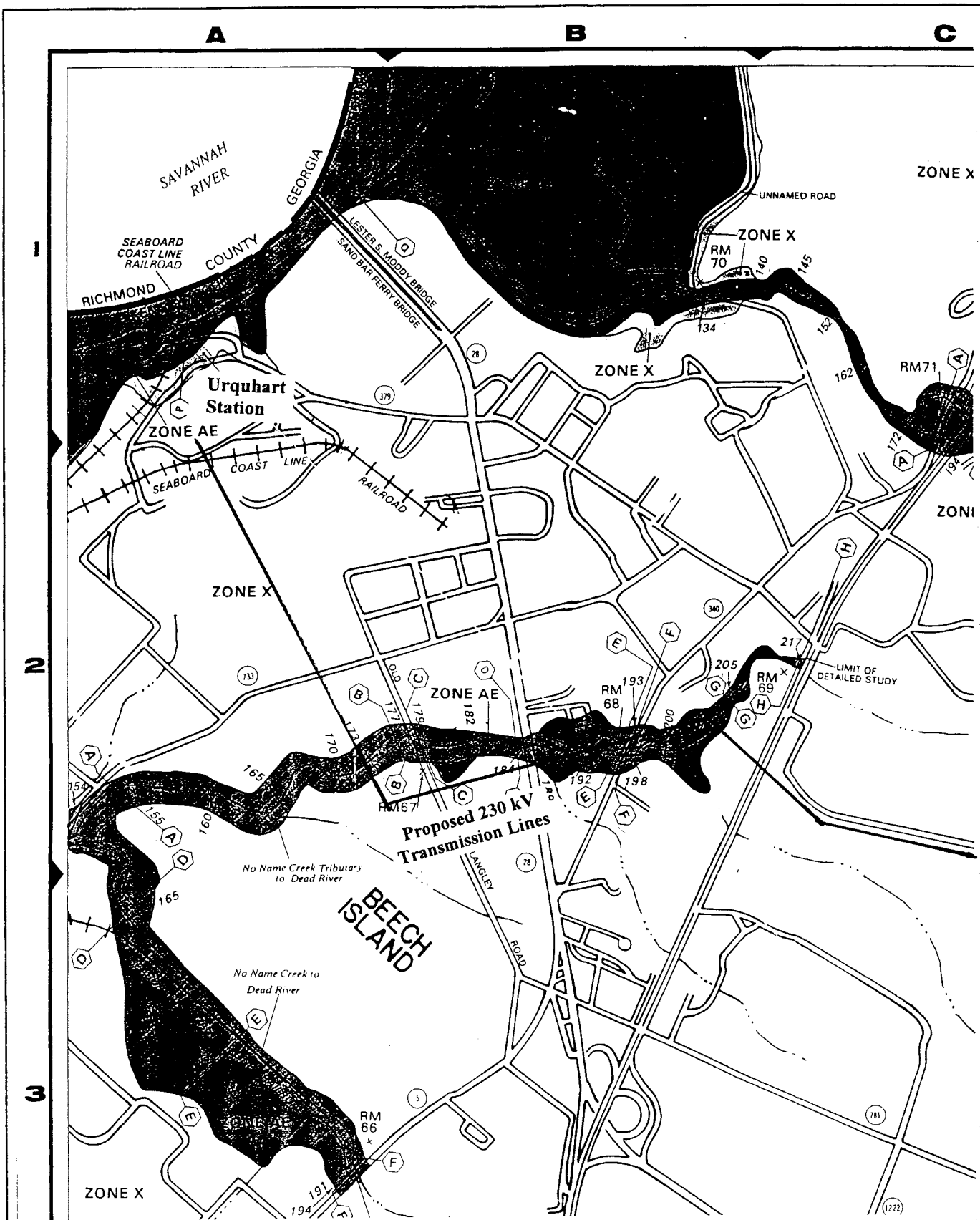
SITE LOCATION MAP
USGS TOPOGRAPHIC MAP
HOLLOW CREEK
QUADRANGLE

DRAWN BY: MXM

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FIGURE
4





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ENVIRONMENTAL ASSESSMENT
PROPOSED 230 KV TRANSMISSION LINES
URQUHART GENERATING STATION
BEECH ISLAND, SOUTH CAROLINA

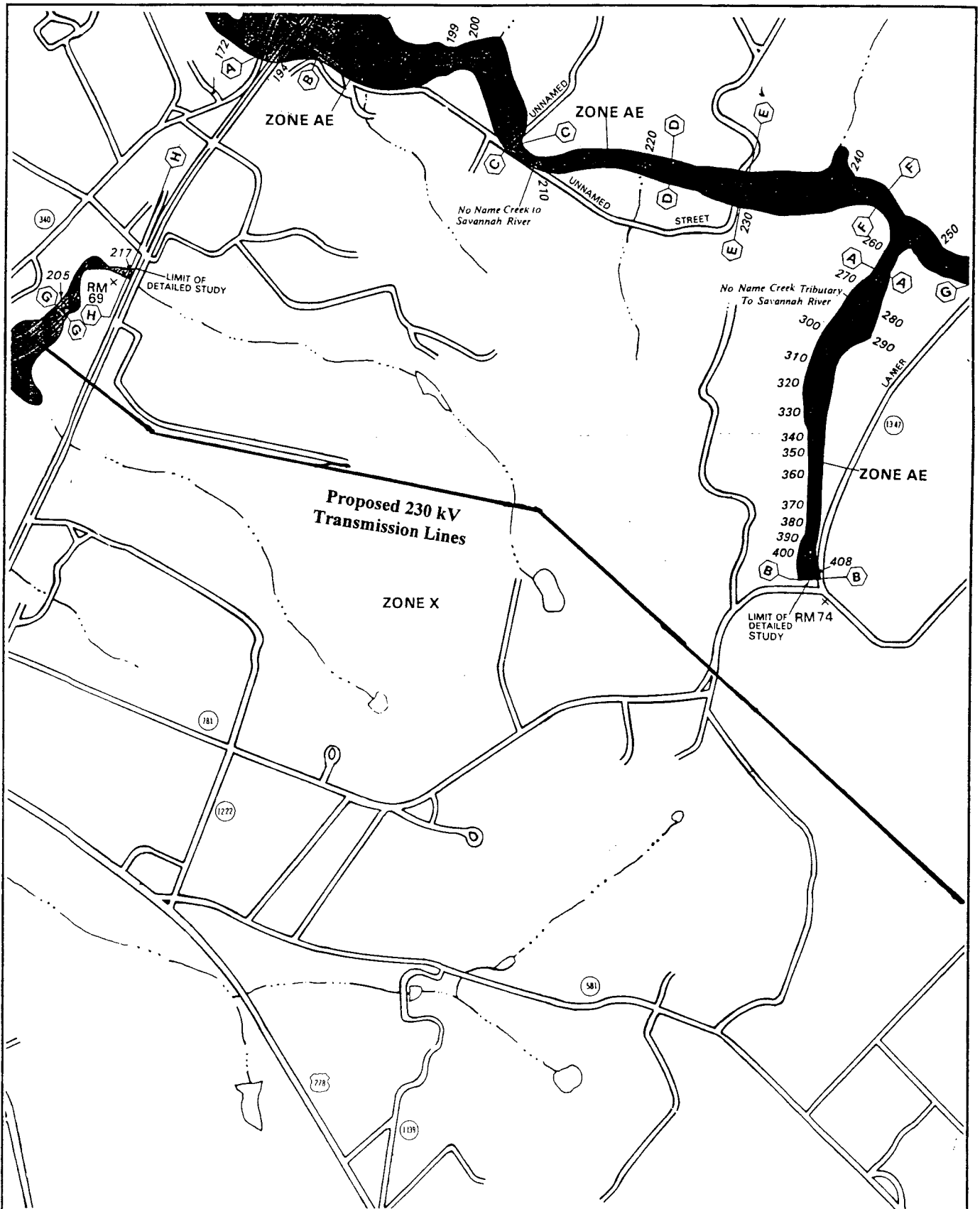
DATE: MARCH 15, 2000

SITE LOCATION MAP
FLOOD INSURANCE RATE MAP
PANEL 450002 0110 C

DRAWN BY: NIB

APPROV. BY: JEB2

FIGURE
1



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ENVIRONMENTAL ASSESSMENT
PROPOSED 230 KV TRANSMISSION LINES
URQUHART GENERATING STATION
BEECH ISLAND, SOUTH CAROLINA

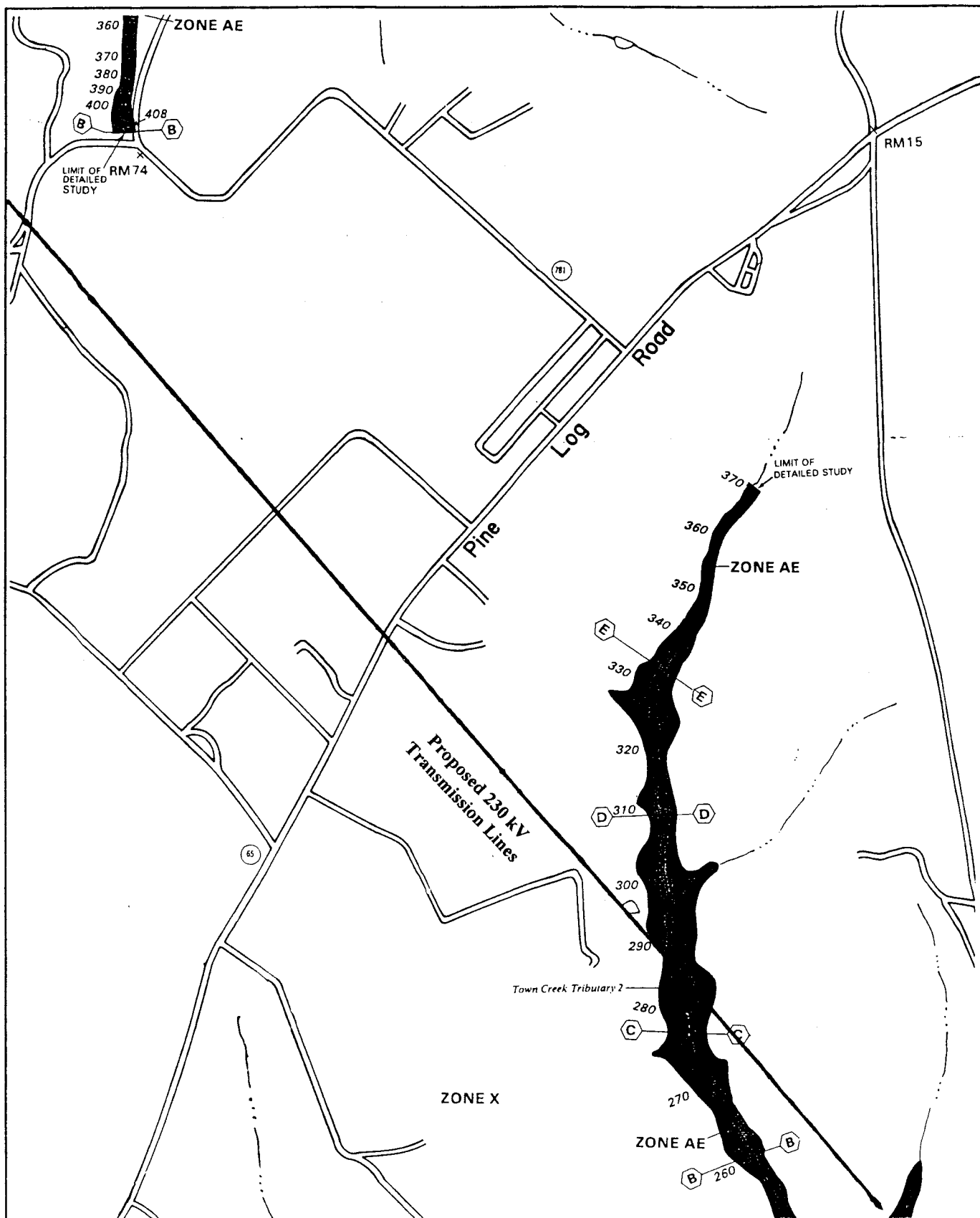
DATE: MARCH 15, 2000

SITE LOCATION MAP
FLOOD INSURANCE RATE MAP
PANEL 450002 0110 C

FIGURE
9

DRAWN BY: NIB

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URQUHART GENERATING STATION
BEECH ISLAND, SOUTH CAROLINA

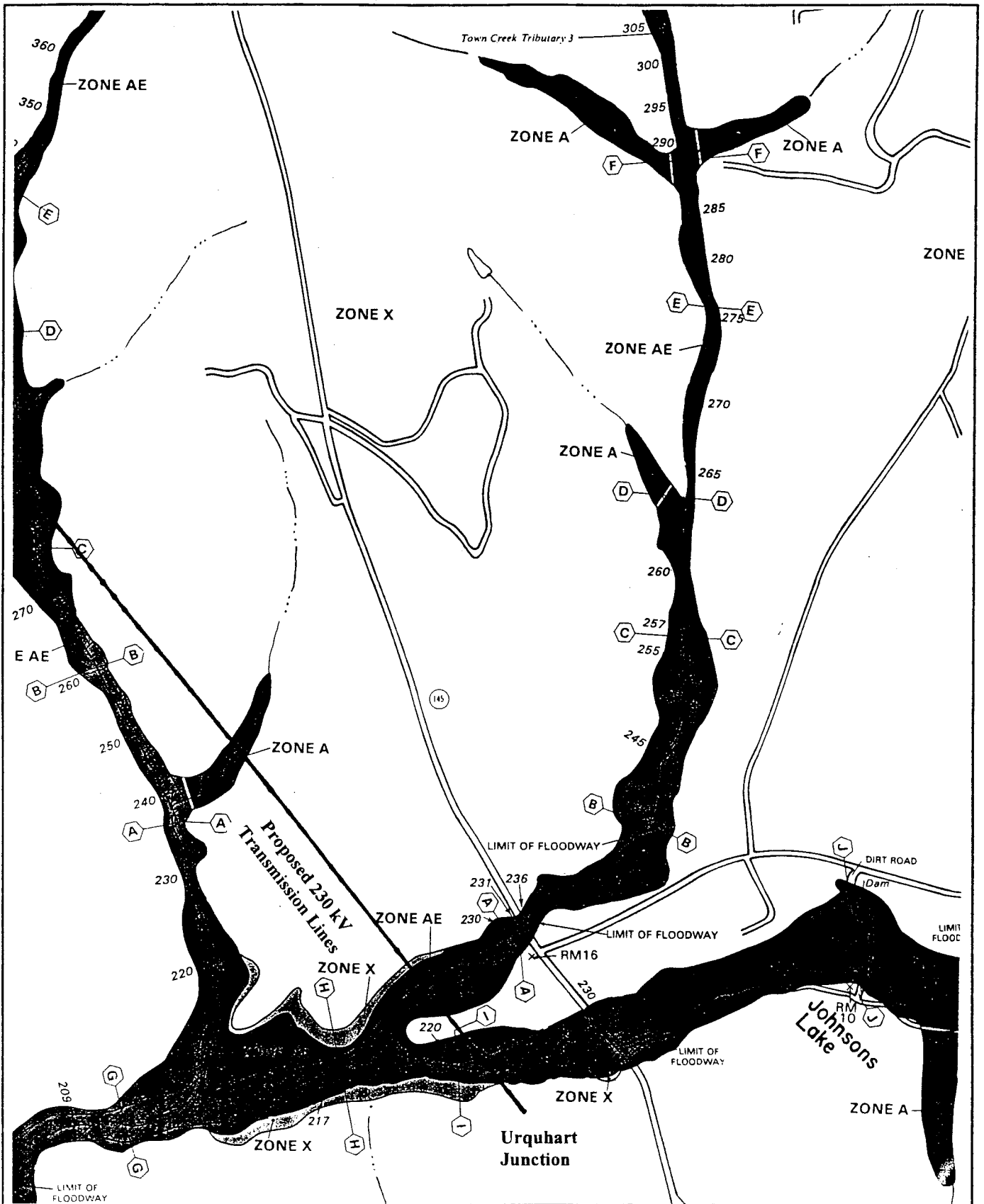
DATE: MARCH 15, 2000

SITE LOCATION MAP
FLOOD INSURANCE RATE MAP
PANEL 450002 0110 C

DRAWN BY: NIB

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FIGURE
10



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ENVIRONMENTAL ASSESSMENT
PROPOSED 230 KV TRANSMISSION LINES
URQUHART GENERATING STATION
BEECH ISLAND, SOUTH CAROLINA

DATE: MARCH 15, 2000

SITE LOCATION MAP
FLOOD INSURANCE RATE MAP
PANEL 450002 0110 C

DRAWN BY: NIB

APPRV BY: JEB2

FIGURE
11

PROOF OF SERVICE

This is to certify that I, Brian W. Beltman, have caused to be mailed this day, one (1) copy of the Application to the South Carolina Public Service Commission by South Carolina Electric & Gas Company for a Certificate of Environmental Compatibility & Public Convenience & Necessity by placing a copy of same in the care and custody of the United States Postal Service, with proper first-class postage affixed thereto and addressed as follows:

Doug Bryant, Commissioner
S.C. Department of Health and
Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Dr. Paul Sandifer, Executive Director
S.C. Department of Natural Resources
Post Office Box 167
Columbia, South Carolina 29202

Dr. Bruce Rippetean
Director and State Archaeologist
S.C. Inst. of Archaeology & Anthropology
1321 Pendleton Street
Columbia, South Carolina 29208-0071

William R. Jennings, Director
S.C. Dept Parks, Recreation & Tourism
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Rodger E. Stroup, Director
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Mayor Frederick Cavanaugh
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Post Office Box 1177
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Aiken County Council
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Langley, South Carolina 29834-1920

Mayor Lark W. Jones
City of North Augusta
Post Office Box 6400
North Augusta, South Carolina 29861-6400

Mayor Steve Carver
Town of Wagener
Post Office Box 400
Wagener, South Carolina 29164-0400

Mayor Grady P. Parker
Town of New Ellenton
Post Office Box 459
New Ellenton, South Carolina 29809-0459

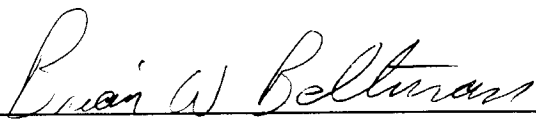
Mayor Patrick D. Sullivan
Town of Jackson
Post Office Box 386
Jackson, South Carolina 29831-0386

Mayor N. R. "Bob" Salley, Sr.
Town of Salley
Post Office Box 484
Salley, South Carolina 29137-0484

Mayor Thomas H. Williams
Town of Perry
147 Center Street
Perry, South Carolina 29137-9999

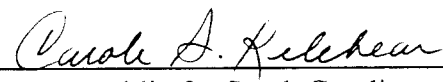
Mayor Clyde Smith
Town of Monetta
Post Office Box 8
Monetta, South Carolina 29105-0008

Mayor Frank M. Mizell
Town of Windsor
Post Office Box 1
Windsor, South Carolina 29856-0001



Brian W. Beltman

SWORN to before me this
6TH day of APRIL, 2000



Notary Public for South Carolina

My Commission Expires: 10-7-2008

PUBLIC NOTICE

The South Carolina Electric & Gas Company is making Application to the South Carolina Public Service Commission on or about April 7, 2000, for a Certificate of Environmental Compatibility & Public Convenience & Necessity for the acquisition, installation and operation of two 150 MW combined cycle gas-powered turbines at its Urquhart plant in Aiken County, South Carolina and associated transmission facilities. This Application is in accordance with the Code of Laws of South Carolina 1976, Chapter 33, Title 58, as amended, entitled "Utility Facility Siting and Environmental Protection Act."

All parties may inspect maps, studies or other documents at South Carolina Electric & Gas Company's offices at both 1426 Main Street, Columbia, South Carolina and at the Company's Urquhart Plant, 100 Urquhart Drive, Beech Island, South Carolina 29842.

Any person making wishing to comment on the Application or obtain additional information with regard thereto should contact in writing the South Carolina Public Service Commission, Post Office Box 11649, Columbia, South Carolina 29211, with a copy to Brian Beltman, South Carolina Electric and Gas Company, Eighth Floor, Palmetto Center, 1426 Main Street, Columbia, South Carolina 29218-0002.

LIST OF NEWSPAPERS IN WHICH PUBLIC NOTICE WILL BE PUBLISHED

The State, Columbia, South Carolina

The Post & Courier, Charleston, South Carolina

The Aiken Standard, Aiken, South Carolina

STATE OF SOUTH CAROLINA

VERIFICATION

COUNTY OF RICHLAND

PERSONALLY appeared before me H. Thomas Arthur, who on oath says that SOUTH CAROLINA ELECTRIC & GAS is a corporation and is the Applicant in the within matter; that he/she is Sr. VP & General Counsel of said corporation and as such is authorized to make this verification on its behalf; that he/she knows the contents of the foregoing Application for a Certificate of Environmental Compatibility & Public Convenience & Necessity and that the same is true to the best of his/her knowledge, information and belief.

H. Thomas Arthur
Sr. VP & General Counsel

SWORN to before me this
6th day of April, 2000

Barbara J. Bladen
Notary Public for South Carolina

My Commission Expires: 02/25/2001